



Autonomous and Connected Vehicles Briefing

Date: September 20, 2016

To: Joint Committee on Cybersecurity, Information Technology, & Biotechnology

From: Leslie Knapp, Jr.

The Maryland Association of Counties (MACo) appreciates the opportunity to offer the county perspective on autonomous and connected vehicles. As the technology becomes more powerful and practical, autonomous and connected vehicles will bring numerous benefits and unique challenges to county governments. In recognition of this, MACo has been participating in the Maryland Department of Transportation's Autonomous and Connected Vehicle Working Group since its inception in December of 2015.

For the purposes of this testimony, an autonomous vehicle is a vehicle that can control itself for short or extended periods of time, or does not need a driver at all. A connected vehicle is plugged into a network or other information system and can relay information and possibly receive commands through this system. Low level versions of both autonomous and connected vehicles are already being driven on county roadways. However, as this technology matures, counties will need to address three broad issue areas: (1) planning and infrastructure; (2) law enforcement and training; and (3) liability.

Planning and Infrastructure

County land use and road planning will likely change as a result of fully autonomous and connected vehicles. Autonomous vehicles will present county planners and engineers with more mobility options, increased traffic efficiency, and fewer accidents. However, road infrastructure will have to change to reflect the need for clear road markings and signage to allow autonomous vehicles to properly navigate. This will be a challenge as counties are struggling with even basic road maintenance due to the current level of Highway User Revenue funding.

Even more challenging will be the implementation of any information technology (IT) infrastructure needed to enable connected vehicles. Creating a working and secure network of sensors and relays throughout a county will be beyond the fiscal and engineering means of most jurisdictions.

Law Enforcement and Training

Autonomous and connected vehicles will require changes to current traffic laws and the way they are enforced. Many current laws center on the actions of a human driver and will need to be re-tailored to accommodate autonomous vehicles.

For example, is someone who is drunk or impaired still subject to the relevant traffic law if their car is actually doing the driving? What about cell phone usage or texting? Can someone sleep while being driven by an autonomous vehicle? What about underage, elderly, or medically impaired passengers who could not qualify for a driver's license or otherwise drive? When an accident happens with an autonomous vehicle, is the vehicle or the human passenger at fault? If there is no human passenger at all, is the car at fault? How would points and fines be assessed in such a situation?

Connected vehicles will likely have the ability to be manipulated remotely. Would a law enforcement agency have the authority to remotely order a suspect vehicle to automatically pull over or shut down? Would the processes for identifying vehicles or tracking their location change?

Any changes to law enforcement practices will also require the (potentially extensive) retraining of law enforcement personnel.

Liability

Counties are concerned about liability for both infrastructure and county-owned vehicles. Clear rules are needed for liability regarding road infrastructure (for autonomous vehicles) and IT infrastructure (for connected vehicles). Otherwise, a county will often find itself the subject of "faulty infrastructure" claims as a result of its financial resources. Furthermore, what are the reasonable steps a county should take to not be legally liable if a connected vehicle is "hacked" through a county network? Remote vehicle hacking has already occurred and fully connected vehicles will have many more access points against which an attack can be launched.

There also needs to be clarity about the liability of county-owned fully autonomous vehicles that cause an accident or injury. What is the appropriate standard of care a vehicle owner must follow to not be liable? Finally, how will insurance coverage function for autonomous and connected vehicles?

Conclusion

The promise of autonomous and connected vehicles is great but also poses significant challenges to county governments. It is likely that over time these technologies will produce a "seismic" – as opposed to an incremental – change in how transportation functions. Given this impact, MACo and the counties need to be part of the ongoing policy and decision-making process.

Thank you for the opportunity to submit this testimony. If you have any further questions, please contact Les Knapp at 410.269.0043 or lnapp@mdcounties.org.